

Algebraic Concepts
Lesson 19: Systems of Linear Equations
Math for Standards

Name _____

Date _____

EQ: How do you solve systems of equations?

A system is when _____ equations are being solved for at the same time.

The lines could intersect at _____ (_____).

The lines could be parallel and _____ (_____).

The lines could end up being _____ (_____
_____).

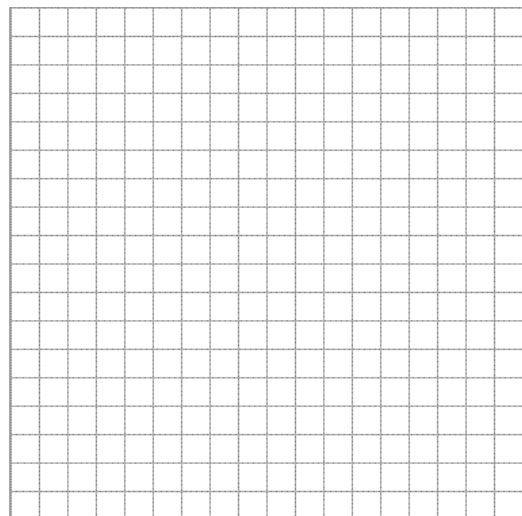
There are _____ that we will be looking at solving systems:

1. You can solve the systems by _____ (not always effective).
2. You can solve the systems by _____.
3. You can solve the systems by _____.

You should _____ check your answer!!!

Example 1: Solve the system by graphing.

$$\begin{cases} y = 3x - 2 \\ y = -x - 6 \end{cases}$$



Example 2: Solve the system by substitution.

$$\begin{cases} 2x - 3y = -2 \\ 4x + y = 24 \end{cases}$$

Example 3: Solve the system algebraically with addition and multiplication (linear combination).

$$\begin{cases} 2x + y = 9 \\ 3x - y = 16 \end{cases}$$

Example 4: Solve the system algebraically with addition and multiplication (linear combination).

$$\begin{cases} 2x - y = 9 \\ 3x + 4y = -14 \end{cases}$$

Example 5: Solve the system algebraically with addition and multiplication (linear combination).

$$\begin{cases} 4x - 3y = 25 \\ -3x + 8y = 10 \end{cases}$$

Example 6: Solve the system by a method of your choice.

$$\begin{cases} 12x - 3y = 6 \\ 4x - y = 2 \end{cases}$$